

IN THE UNITED STATES DISTRICT COURT  
FOR THE WESTERN DISTRICT OF WISCONSIN

---

HAVCO WOOD PRODUCTS, LLC,

Plaintiff,

v.

10-cv-566-wmc

INDUSTRIAL HARDWOOD  
PRODUCTS, INC.,

Defendant.

---

In this lawsuit, plaintiff Havco Wood Products, LLC (“Havco”) alleges that defendant Industrial Hardwood Products, Inc. (“IHP”) is infringing five of plaintiff’s patents relating to fiber reinforced composite wood boards used in the flooring of truck trailers. Both parties moved for claims construction (dkt. ##25, 31), which the court previously granted in part and denied in part (dkt. #39). The court issued a preliminary claims construction order in advance of a claims construction hearing. (Dkt. #40.) After hearing argument, the court now revises the preliminary order to add language excluding a discontinuous bond, which was disclaimed during the relevant prosecution history. In this opinion, the court will set forth its construction of two terms: (1) “substantially continuously bonded” (‘735 patent, claims 1 and 11; ‘824 patent, claims 1 and 15; ‘766 patent, claim 29); and (2) “substantially continuously coating” (‘942 patent, claims 1 and 31; ‘765 patent, claims 1, 28, 37 and 38).

Also pending is a motion by defendant to limit the number of asserted claims. (Dkt. #47.) The court will grant in part and deny in part the motion as provided below.

## BACKGROUND

Havco alleges infringement of five related patents: U.S. Patent Nos. 5,928,735 ('735 patent), 6,183,824, ('824 patent), 6,179,942 ('942 patent), 6,558,765 ('765 patent), and 6,558,766 ('766 patent). All of the inventions in the patents in suit involve a composite flooring system for semi-trailers typically used by the over-the-road trucking industry. The patented flooring is a combination of a hardwood floor segment and an underlay of a fiber reinforced plastic ("FRP"). The invention purports to disclose certain improvements over earlier flooring systems, including that it resists "pop-out of the hardwood segments at the shaped coupling portions and improves one or more of the flexural modulus, strength and load carrying capacity of the trailer floor." ('735 Patent (dkt. #1-1) col. 12:23-26.) To achieve this, each of the patents describes how the hardwood floor segment is to be attached to the FRP. Specifically, the patents describe the hardwood as "substantially continuously bonded" to the FRP or a variant on that language. (*See, e.g.*, '735 Patent (dkt. #1-1) col. 10:53-54.)

### A. The Scharpf Patent

The parties agree that the closest prior art is U.S. Patent No. 5,509,715 (the "Scharpf patent"), which was a focus of the prosecution of the patents in issue and which defendant IHP owns. The Scharpf patent also concerns flooring useful for semi-trailers.

The invention in the Scharpf patent provides:

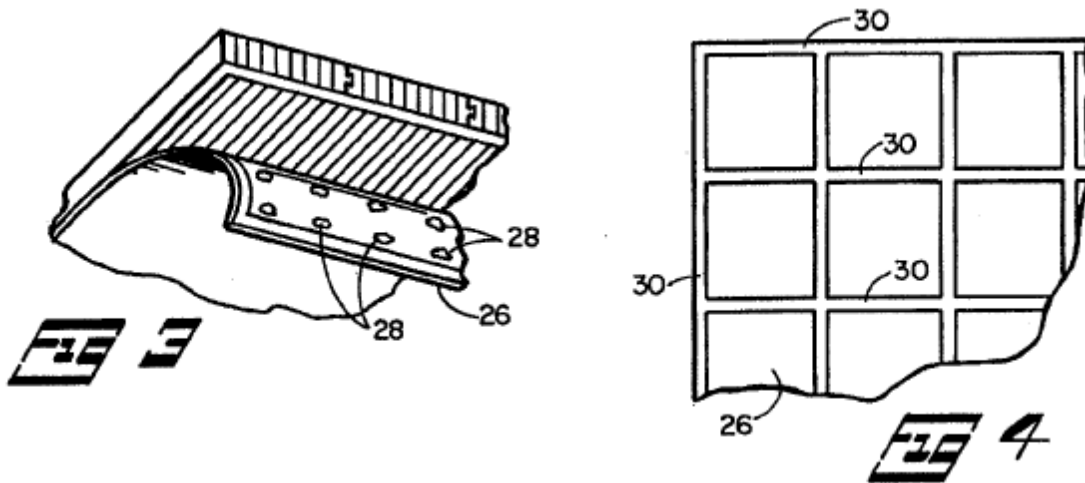
A barrier film or fabric, which is permeable to vapor and impermeable to liquid, is disposed on the undersurface of the flooring, and *discontinuous* means adjoins or bonds the film or fabric to the flooring at least in the perimeter of the flooring.

(Scharpf patent (dkt. #33-10) abstract (emphasis added).)<sup>1</sup> Claim 1 of the patent similarly discloses “discontinuous means for adjoining said plastic film or fabric to said undersurface of said flooring at least in the perimeter of said flooring.” (*Id.* at col. 8:1-3.)

“Discontinuous means” is defined in the Scharpf patent as

the line of adjoining, attaching or uniting the two components (i.e., barrier and flooring) so as to be essentially adjacent, and as a discontinuous pattern in that *less than the entire surface or area of the film or fabric is adjoined to the flooring.*

(*Id.* at col. 3:15-26 (emphasis added).) Certain diagrams portraying the “adhesive pattern as applied to the barrier” show areas where adhesive is not applied.



(*Id.* at p.2; *see also id.* at col. 3:53-59.)

<sup>1</sup> There are other important differences between the Scharpf patent and Havco’s patents, which are not material to this claims construction. For example, the Scharpf patent does not disclose a fiber reinforced plastic underlay, but rather a “continuous breathable layer of film or fabric.” (Scharpf Patent (dkt. #33-10) 2:61.)

**B. Prosecution of the ‘735 Patent**

During the prosecution of the ‘735 patent, Havco originally attempted to claim its invention as “a flooring for use as a vehicle floor, the floor comprising: a laminated wood overlayment; and a fiber reinforcement underlayment *bonded* to the overlayment.” (Declaration of Anthony R. Zeuli (“Zeuli Decl.”), Ex. 1 (dkt. #29-2) 26 (emphasis added).) Havco eventually amended its claims, adding the language “substantially continuously” before bonded, and emphasizing in its responses to the patent examiner that the Scharpf patent is “**discontinuously** joined to the undersurface of a floor.” (*Id.*, Ex. 2 (dkt. #29-3) 52, 55 (emphasis in original).)

In the same amendment, Havco also added the following language to claim 1:

Whereby said substantially continuous plan polymer layer of the fiber reinforced polymer bonded to the bottom surface of each of the plurality of hardwood boards of the trailer floor resists pop-out of the hardwood segments at the shaped coupling portions and improves one or more of the flexural modulus, strength and load carrying capacity of the vehicular trailer floor.

(*Id.* at 52-53; *see also* ‘735 Patent (dkt. #1-1) col. 10:66 - 11:5.)

The subsequent patent applications filed by Havco, and the patents issued by the USPTO, also included the “substantially continuously” language or language similar to that. (*See* 942 Patent (dkt. #1-3) (“substantially bonded”; “substantially continuously coating”); ‘824 Patent (dkt. #1-2) (“substantially continuously bonded”); ‘765 Patent (dkt. #1-4) (“substantially continuously coating”; “substantially bonded”); ‘766 Patent (dkt. #1-5) (“substantially continuous adhesive bond”; “substantially continuously bonded”).)

## OPINION

**I. Claims Construction Standards**

When construing claims, courts must look to so-called intrinsic evidence: the claims themselves, then the patent specification and ultimately the prosecution history. *Teleflex, Inc. v. Ficos N. Am. Corp.*, 299 F.3d 1313, 1325 (Fed. Cir. 2002). Examination of the claims' language is the starting point: "claim construction must adhere carefully to the precise language of the claims that the patent [examiner] has allowed." *Ardisam, Inc. v. Ameristep, Inc.*, 336 F. Supp. 2d 867, 879 (W.D. Wis. 2004) (citing *Autogiro Co. of America v. United States*, 384 F.2d 391, 396 (Ct. Cl. 1967)). The language is to be construed as it would be understood by one of ordinary skill in the relevant art, given its context and the other patent claims. *Rexnord Corp. v. Laitram Corp.*, 274 F.3d 1336, 1342 (Fed. Cir. 2001). District courts must remain aware that "[t]he patent applicant may not have used words consistent with the dictionary definition because an applicant can act as his or her own lexicographer or may disavow or disclaim aspects of a definition 'by using words or expression of manifest exclusion or restriction, representing a clear disavowal of claim scope.'" *Ardisam*, 336 F. Supp. 2d at 879-80 (quoting *Golight, Inc. v. Wal-Mart Stores, Inc.*, 355 F.3d 1327, 1331 (Fed. Cir. 2004)).

An initial construction of the precise language of the claim is, therefore, considered in light of the specification to determine whether the inventor expressed a different meaning for the language, whether the preferred embodiment is consistent with the initial interpretation and whether the inventor specifically disclaimed certain subject matter. *Rexnord*, 274 F.3d at 1342-43. The specification contains a written description of the invention that is meant to help explain the invention and possibly define claim

terms, *Markman v. Westview Instruments, Inc.*, 52 F.3d 967, 979 (Fed. Cir. 1995), but as a general rule, “limitations from the specification are not to be read into the claims,” *Golight*, 355 F.3d at 1331. Finally, the interpretation is examined for consistency with the patent’s prosecution history and any clear disclaimers that may have been made. *Rexnord*, 274 F.3d at 1343.<sup>2</sup>

## II. The Parties’ Proposed Constructions

In light of the intrinsic evidence here, the court rejects both of the parties’ proposed constructions. Havco’s proposed construction is unreasonably broad, providing less guidance than if no construction were provided at all. Indeed, construing “substantially continuously bonded” to mean “a polymer layer bonded to a hardwood board more so than U.S. Patent No. 5,509,715 (‘Scharpf’)” fails to provide *any* definition of the term, much less where “substantially” falls on the continuum between a discontinuous and continuous bond. While Havco argues persuasively that the ‘735 patent discloses certain functional improvements over the prior art, because the FRP is substantially continuously bonded to the wood overlay, it fails to incorporate those improvements in its proposed construction.

In contrast, IHP’s proposed construction is unreasonably narrow. Borrowing language from the Scharpf patent, IHP argues that “substantially continuously bonded”

---

<sup>2</sup> While a court may consult extrinsic evidence, such as dictionaries, treatises and expert testimony for background information and to “shed useful light on relevant art,” this type of evidence is less reliable than intrinsic evidence in determining the meaning of claim terms and is “unlikely to result in a reliable interpretation of patent claim scope unless considered in the context of the intrinsic evidence.” *Phillips v. AWH Corp.*, 415 F.3d 1303, 1317-19 (Fed. Cir. 2005) (internal citations omitted).

means “the polymer layer being ‘bonded excluding by a pattern of connection where less than the entire surface area of the polymer is adjoined, to the bottom surface wood board.” The court’s adoption of this construction would effectively define the phrase to mean a continuous (or absolute) bond. Since this definition, like Havco’s, fails to take into account the addition of “substantially” before “continuously bonded,” it is similarly unhelpful to the court or a potential jury.

### III. Incorporating Objectives of the Claimed Invention

In *Medrad, Inc. v. MRI Devices Corp.*, 401 F.3d 1313, 1319 (Fed. Cir. 2005), the Federal Circuit approved a district court’s construction of the term “substantially uniform magnetic field” to mean a magnetic field that is “substantially uniform to obtain useful MRI images” consistent with the invention’s planned objective. *Id.* at 1318. Here, the court is similarly persuaded that Havco’s simultaneous addition of the modifier “substantially continuously” before “bonded” and addition of language linking the bonding to certain objectives of the claimed invention is instructive in construing the claims “substantially continuously bonded” and “substantially continuously coating.”

At the claims construction hearing, IHP argued that the functional objectives added to the language in claim 1 of the ‘735 patent – regarding resisting pop-out and improving flex, strength and load carrying capacity -- refers to the function of the FRP, and not the function of the bond. (Tr. (dkt. #42) 18, 37.) In support of this argument, IHP relies on claim 20 of the ‘766 patent which contains the “substantially continuously bonded” term, but *not* the functional objective language in claim 1 of the ‘735 patent. IHP reasons that the exclusion of this language from the ‘766 patent signals that the

functional objectives language must refer to the functionality of the FRP itself rather than the bond; therefore, it “would be improper to include within the definition of ‘substantially continuously bonded’ a separate limitation that appears in the ‘735 and the ‘824 patent.” (*Id.* at 19.)

The court rejects IHP’s argument for several reasons. As noted, the functional objectives language was added at the same time in the prosecution of the ‘735 patent as the “substantially continuously” language. As in *Medrad*, this supports defining “substantially continuously” consistent with the intended objective of the invention. Moreover, since the bonding of the FRP to the hardwood segment impacts the ability of the product to resist pop-outs of the wood segment, it is counterintuitive to constrain the functional objectives language to the FRP alone. Similarly, there is no reason to limit the other structural improvements, namely improving flex, strength and carrying capacity of the flooring system, to the FRP itself, and not the bonding of the FRP to the hardwood segment. IHP’s effort to separate the functional aspects of the bond from the FRP lacks any support in a plain reading of the claims themselves, the patent specification, or the prosecution history. Separating the two also offends common sense. Finally, the ‘766 patent issued four years after the ‘735 patent, and there is no basis for assuming that the patent examiner understood that he or she was allowing a broader claim than in the earlier patents. Given the prosecution history here, the court declines IHP’s invitation to read what is, at most, an arguable, implicit limitation into this later-issued patent, much less into the earlier ‘735 patent.

IHP also argues that *Medrad* is distinguishable on the facts, primarily because *Medrad* did not involve the prosecutorial disclaimers present here. This factual



distinction, however, does not require the rejection of *Medrad*'s larger holding that a claim construction may incorporate the patent's intended objectives.<sup>3</sup>

#### **IV. Disclaimer of Discontinuous Bond**

In advance of the construction hearing, the court issued a preliminary claims construction order construing the terms with reference to the functional objectives of the claim, consistent with *Medrad*. At the hearing, IHP argued persuasively that the court's construction of "substantially continuously bonded" and "substantially continuously coating" should exclude Havco's disclaimer during the prosecution of the '735 patent of a discontinuous bond as taught by the Scharpf patents. It is well-established that the court should consider the treatment of claim terms during the prosecution of the patent, particularly the patentee's explanation of a term given to overcome an examiner's rejection. *See Honeywell Int'l, Inc. v. Universal Avionics Sys. Corp.*, 493 F.3d 1358, 1363-64 (Fed. Cir. 2007) (relying on prosecution disclaimer, including modifications to claim language made in response to examiner's rejection of application, in construing terms); *Phillips v. AWH Corp.*, 415 F.3d 1303, 1317 (Fed. Cir. 2005) ("[T]he prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be.").

---

<sup>3</sup> As explained below, this does not mean that Havco's disclaimers during the prosecution of the '735 patent are immaterial to construing the terms at issue.

During the prosecution history, Havco repeatedly distinguished the Scharpf patent from its invention on the basis that the Scharpf patent calls for a discontinuous bond. (*See* IHP's Opening Br. (dkt. #27) 32.) At one point, Havco stated:

Scharpf has a vapor permeable, liquid impermeable film **discontinuously** joined to an undersurface of a floor by a discontinuous pattern of adhesive (28) to allow the floor to be breathable. . . . It is quite evidence from even these brief discussions of the cited references that they do not suggest the trailer for system of the Applicants' claims, which have . . . the bottom surface of this hardwood floor has a substantially continuous planar, fiber reinforced polymer layer bonded substantially continuously thereto . . . .

(Zeuli Decl., Ex. 2 (dkt. #29-3) 254 (emphasis in original).) As noted earlier, the Scharpf patent also defines "discontinuous bond" as involving a "discontinuous pattern in that less than the entire surface or area of the film or fabric is adjoined to the flooring." (Scharpf patent (dkt. #33-10) col. 3:15-26 (emphasis added).) The use of "pattern" and the diagrams included in the Sharpf patent demonstrate that the Sharpf patent contemplated deliberate gaps in the placement of the adhesive.

While the court's discussion is limited to the '735 patent, the "substantially continuously bonded" term and related terms are in all five patents-in-issue. As in *Andersen v. Fiber Company*, 474 F.3d 1361 (Fed. Cir. 2007), Havco's disclaimers during the prosecution of the '735 patent "were global -- they applied to all the claims of the patent -- and thus served to limit all the claims." *Id.* at 1369. In addition, the disclaimer applies to all patents-in-issue. *See Microsoft Corp. v. Multi-Tech Sys., Inc.*, 357 F.3d 1340, 1349 (Fed. Cir. 2004) ("[T]he prosecution history of one patent is relevant to an

understanding of the scope of a common term in a second patent stemming from the same parent application.”).<sup>4</sup>

## V. IHP’s Motion to Limit Number of Asserted Claims

IHP also requests that the court enter an order directing Havco to limit its asserted claims from the current 135 claims to ten. (Def.’s Mot. to Limit Claims (dkt. #47).) As IHP points out, and Havco agrees, courts routinely require such limitations. (*Id.* at 3 (listing multiple cases in which the Federal Circuit has affirmed and district courts have reduced the number of asserted claims).)

Given the number, Havco agrees a limitation on its claims may be appropriate, but argues that now is not the appropriate time to order such a restriction. Indeed, Havco’s response appears inconsistent, arguing both that IHP should have sought a limitation earlier and that issuing a restriction now would be premature. (*Compare* Pl.’s Opp’n Br. (dkt. #48) at top of page 2 (criticizing IHP for “not seek[ing] to limit the number of asserted claims earlier in this litigation), *with id.* at bottom of page 2 (arguing that “the Court should deny IHP’s motion as premature”).

Given that initial expert disclosures are due in less than one month, with the dispositive motion deadline approximately three motions away, the court agrees that now is the appropriate time for Havco to limit its asserted claims. Instead of addressing IHP’s

---

<sup>4</sup> IHP also asks the court to construe “substantially” to mean “largely, but not necessarily wholly.” (IHP’s Br. (dkt. #27) 30.) At least at this time, the court is disinclined to do so both because IHP points to no extrinsic evidence supporting this construction and the phrase “largely, but not necessarily wholly” is arguably no more clear than “substantially.”

proposal to limit the claims to ten, Havco spends much of its brief complaining about having “14 independent claims of the three apparatus and two method patents IHP infringes, let alone any dependant claims” and IHP’s incomplete “allegations of invalidity and inequitable conduct.” (*Id.* at 1, 2 & 5.) Whether IHP’s responses or contentions are somehow inadequate is not presently before the court; nor does Havco explain how a reasonable limitation on its claims is likely to implicate its due process rights. *See In re Katz Interactive Call Processing Patent Litig.*, 639 F.3d 1303, 1312 (Fed. Cir. 2011) (rejecting due process argument where the plaintiff failed “to demonstrate that some of its unselected claims presented unique issues as to liability or damages).

Absent Havco offering a reasonable limit, the court finds that limiting the asserted claims to fifteen is appropriate, especially in light of the fact that the patents are all related and the claims significantly overlap. This will allow Havco to select roughly three claims per patent and will also allow Havco to assert all of the independent claims in the patents-in-suit, if it so chooses. *See, e.g., Stamps.com Inc. v. Endicia, Inc.*, No. 2010-1328, 2011 WL 2417044, at \*1 (Fed. Cir. June 15, 2011) (affirming district court’s reduction of asserted claims from 629 claims of eleven patents to 15); *In re Katz*, 639 F.3d at 1312 (affirming district’s court reduction from 1975 claims to sixteen per defendant group). Havco shall identify up to fifteen claims on or before Friday, November 18, 2011. Based on other court’s reductions, the overlapping nature of the patents and the relatively straightforward nature of the claims and technology, allowing Havco to identify fifteen claims seems fair, even generous, but upon a proper showing, the court may allow Havco to add additional claims.

ORDER

IT IS ORDERED that:

- 1) The court construes the following disputed claim terms of United States Patent Nos. 5,928,735, 6,183,824, 6,179,942, 6,558,765, and 6,558,766 as follows:
  - “**substantially continuously bonded**” means bonding the hardwood floor segment to the FRP underlay substantially continuously to obtain composite flooring that resists pop-out of the hardwood segments at the shaped coupling portions and improves one or more of the flexural modulus, strength and load carrying capacity of the vehicular trailer floor. This term excludes a discontinuous bond line forming a discontinuous pattern of connection between the FRP and the floor segment in that less than the entire surface or area of the FRP is adjoined to the hardwood floor segment.
  - “**substantially continuously coating**” means coating the hardwood floor segment to the FRP underlay substantially continuously to obtain composite flooring that resists pop-out of the hardwood segments at the shaped coupling portions and improves one or more of the flexural modulus, strength and load carrying capacity of the vehicular trailer floor. This term excludes a discontinuous bond line forming a discontinuous pattern of connection between the FRP and the floor segment in that less than the entire surface or area of the FRP is adjoined to the hardwood floor segment.
- 2) Defendant Industrial Hardwood Products, Inc.’s motion to limit the number of asserted claims (dkt. #47) is GRANTED IN PART AND DENIED IN PART; and the court orders plaintiff Havco Wood Products, LLC, to limit its asserted claims to no more than fifteen claims.
- 3) Plaintiff Havco shall identify the fifteen claims on or before Friday, November 18, 2011.

Entered this 10th day of November, 2011.

BY THE COURT:

/s/

---

WILLIAM M. CONLEY  
District Judge